

Patent Application No. 09/682,024

IN THE CLAIMS:

Claim 1. (previously presented) A device providing a display screen and performing predetermined processing by operating a pointer displayed on the display screen, the device comprising:

5 a display controller for controlling a display position of the pointer on the display screen;

a displacement detector for detecting a displacement of the device itself; and

10 a pointer mover for moving the pointer on the display screen based on the detected displacement of the device itself, wherein the displacement detector comprising an image sensor, wherein an image sensed by the image sensor is processed to obtain a displacement of the device itself.

Claim 2. (canceled)

Claim 3. (previously presented) The device according to claim 1, wherein the image sensor comprising a complementary metal-oxide semiconductor or a charge coupled device.

Claim 4. (previously presented) The device according to claim 1, wherein the image sensor comprising an infrared sensor.

Claim 5. (previously presented) The device according to claim 1, further comprising an operator for activating the image sensor.

5 Claim 6. (original) The device according to claim 5, wherein the operator further includes the function for directing a selection of an object pointed to by the pointer or for the execution of predetermined processing defined for the object, whereby the operator has a plurality of functions.

Claim 7. (original) The device according to claim 1, wherein the device is of a wristwatch type.

Claim 8. (previously presented) A wristwatch type device, comprising:

5 a display for displaying a screen;  
a case for supporting the display;  
an attached belt attached to the case;  
a touch sensor mounted in the case or the attached belt for

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performing a predetermined operation on an object displayed on the screen, wherein the touch sensor is provided on both sides of the display; and

10        an image sensor, wherein an image sensed by the image sensor is processed to obtain a displacement of the device itself.

Claim 9. (canceled)

Claim 10. (original) The wristwatch type device according to claim 8, further comprising:

displacement detection section for detecting a displacement of the display; and

5        pointer position changing device for changing a display position of a pointer based on the detected results, thereby moving the pointer displayed on the screen.

Claim 11. (previously presented) A method for moving a position of a pointer displayed in a display of a device, comprising:

5        a first step of using an image sensor to take an image of a physical object facing the device continuously and detecting a relative displacement between the taken object and the display; and

a second step for changing a display position of the pointer displayed on the display based on the detected displacement.

Claim 12. (original) The method according to claim 11, wherein the first step further comprising the steps of:

5        calculating a motion vector at a certain place in an image based on the movement of the image that was taken multiple times; and obtaining a relative displacement between the object and the display based on the calculated motion vector.

Claim 13. (original) The method according to claim 12, when moving the device relative to the object, the relative displacement between the object and the display is obtained by inverting a sign of the motion vector.

Claim 14. (original) The method according to claim 11, wherein the first step comprising the steps of:

generating a time-series moving pattern of a certain place based on a position of the certain place in a principal image and a

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5 position of a place corresponding to the certain place in a plurality  
of other images that were taken apart in time from the principal  
image; and

comparing the generated time-series moving pattern with a  
plurality of model patterns registered in advance to select a most  
10 approximate model pattern;

wherein the second step comprising the steps of changing a  
display position of the pointer based on a moving pattern that was  
defined for the selected model pattern.

Claim 15. (canceled)

Claim 16. (canceled)

Claim 17. (previously presented) The device according to claim 1,  
wherein the image sensor is located in a part of the display screen.

Claim 18. (previously presented) The wristwatch type device  
according to claim 8, wherein the image sensor is located in a part  
of the display.

Claim 19. (previously presented) The device according to claim 1,  
wherein the image sensor has a minimum resolution of 36x36 dots.

Claim 20. (previously presented) The wristwatch type device  
according to claim 8, wherein the image sensor has a minimum  
resolution of 36x36 dots.